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Amendments to the Claims:

1-12. (Canceled)

13. (New) A method of generating an immune response comprising the step of introducing a foreign antigenic agent into a cell of a human by contacting the cell with a non-virulent bacterium comprising a first gene encoding a nonsecreted foreign functional cytolysin operably linked to a heterologous promoter which expresses the cytolysin in the bacterium, and a second gene encoding the foreign antigenic agent under conditions whereby the agent enters the cell, wherein an immune response is generated.

14. (New) The method of claim 13, wherein the bacterium is endocytosed into a vacuole of the cell, the bacterium undergoes lysis and the cytolysin mediates transfer of the agent from the vacuole to the cytosol of the cell.

15. (New) The method of claim 13, wherein the bacterium is dead or non-viable.

16. (New) The method of claim 13, wherein the bacterium comprises the cytolysin.

17. (New) The method of claim 13, wherein the agent is synthesized by the bacterium.

18. (New) The method of claim 13, wherein the bacterium is engineered to deliver to antigen-presenting cells antigenic polypeptides which are presented in association with MHC proteins.

19. (New) The method of claim 13, wherein the bacterium is nonreplicative and nonintegrative into the host cell genome.

20. (New) The method of claim 13, wherein the bacterium is a dead or nonviable laboratory strain of E. coli.

21. (New) The method of claim 13, wherein the bacterium is a laboratory strain of E. coli and the bacterium comprises the cytolysin.

22. (New) The method of claim 13, wherein the bacterium is a dead or nonviable laboratory strain of E. coli and the bacterium comprises the cytolysin.

23. (New) The method of claim 13, wherein the bacterium is a dead or nonviable laboratory strain of E. coli and the bacterium comprises the cytolysin and the cytolysin is listeriolysin.

24. (New) The method of claim 13, wherein the bacterium is a laboratory strain of E. coli engineered to deliver to antigen-presenting cells antigenic polypeptides which are presented in association with MHC proteins.

25. (New) The method of claim 13, wherein there is no growth or metabolism of the bacterium in the eukaryotic cell.

26. (New) A method of generating a physiological response comprising the step of introducing a foreign therapeutic agent into a cell of a human by contacting the cell with a nonvirulent bacterium comprising a first gene encoding a nonsecreted foreign functional cytolysin operably linked to a heterologous promoter which expresses the cytolysin in the bacterium, and a second gene encoding a foreign therapeutic agent, different than the cytolysin, under conditions whereby the therapeutic agent enters the cell, wherein a physiological response to the therapeutic agent is generated.

27. (New) The method of claim 26, wherein the bacterium is endocytosed into a vacuole of the cell, the bacterium undergoes lysis and the cytolysin mediates transfer of the therapeutic agent from the vacuole to the cytosol of the cell.

28. (New) The method of claim 26, wherein the bacterium is dead or non-viable.

29. (New) The method of claim 26, wherein the bacterium comprises the cytolysin.

30. (New) The method of claim 26, wherein the therapeutic agent is synthesized by the bacterium.

31. (New) The method of claim 26, wherein the bacterium is nonreplicative and nonintegrative into the host cell genome.

32. (New) The method of claim 26, wherein the bacterium is a dead or nonviable laboratory strain of E. coli.

33. (New) The method of claim 26, wherein the bacterium is a laboratory strain of E. coli and the bacterium comprises the cytolysin.

34. (New) The method of claim 26, wherein the bacterium is a dead or nonviable laboratory strain of E. coli and the bacterium comprises the cytolysin.

35. (New) The method of claim 26, wherein the bacterium is a dead or nonviable laboratory strain of E. coli and the bacterium comprises the cytolysin and the cytolysin is listeriolysin.

36. (New) The method of claim 26, wherein there is no growth or metabolism of the bacterium in the eukaryotic cell.

37. (New) The method of claim 26, wherein the therapeutic agent is selected from an antibiotic, insecticide, fungicide, anti-viral agent, anti-protozoan agent, enzyme, anti-cancer agent, antibody, anti-inflammatory peptide, and transcription factor.

38. (New) The method of claim 26, wherein the method is indicated by a disease selected from the group consisting of cancer, infection, degenerative disease, and diabetes.

39. (New) The method of claim 26, wherein the cell is a leukocyte.

40. (New) The method of claim 26, wherein the cell is a tumor cell.

41. (New) The method of claim 26, wherein the contacting step comprises administering a pharmaceutical composition comprising a therapeutically effective amount of the nonvirulent bacterium.

42. (New) The method of claim 26, wherein the administration is in vivo.

43. (New) The method of claim 26, wherein the administration is ex vivo.